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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,715	04/16/2004	Charles A. Miller	P213-US	2196
50905	7590	11/01/2006	EXAMINER	
N. KENNETH BURRASTON KIRTON & MCCONKIE P.O. BOX 45120 SALT LAKE CITY, UT 84145-0120			MOFFAT, JONATHAN	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/826,715	Applicant(s) MILLER, CHARLES A.	
	Examiner Jonathan Moffat	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-13 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 14-17 and 22-36 is/are rejected.
- 7) ☒ Claim(s) 37-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's amendments to the claims, filed 10/10/2006, are accepted and appreciated by the examiner. Applicant has amended claims 7 and 9 and added new claims 34-42. In response, the examiner's previous objections to claims 7 and 9 are withdrawn.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1.

Claims 14-17, 22-25, and 26-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In order to constitute statutory subject matter under 35 U.S.C. 101, a method must produce a useful, tangible, and concrete result. Although a determined or calculated propagation delay is certainly useful to one of ordinary skill in the art, it is not inherently tangible and concrete as data alone. A determination or calculation is, by itself, a purely abstract step and is not a practical application. In order to realize the results of a calculation or processing method in a real-world practical application, it is necessary to take a step or steps in order to create a tangible and concrete output useable by one of ordinary skill in the art. This includes but is not limited to storing, printing, displaying, presenting to a user, generating an alert, alarm, or signal, or otherwise operating, controlling, or altering the functionality of further machinery, apparatuses, or processes in accordance with the calculated or prepared data. In this example, simply calculating the propagation delay does not solve the problem said delay presents. This calculated value must be either used for a calibration or at the

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very least made available to an operator or system that can (storing or displaying). Claims 36-42 all appear to meet the statutory requirements of 35 USC 101 and are examples of tangible results.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.

Claims 26-27, 31-33, 36 are rejected under 35 U.S.C. 102(b) as being anticipated Gerrish (US pat 6449568).

With respect to claim 26, Gerrish discloses a method comprising:

1) Determining a first frequency of a calibration signal driven onto a proximal end of a transmission line while said transmission line is terminated in a known impedance that causes a particular condition in a varying standing wave on said transmission line (column 3 lines 32-40).

2) Determining a second frequency of said calibration signal while said transmission line is terminated in an unknown impedance that causes said particular condition on said transmission line (column 3 lines 45-49).

3) Calculating a value of said unknown impedance (column 3 line 49 and column 2 lines 58-63).

With respect to claim 27, Gerrish discloses that the known impedance is one of an open or a short (column 3 lines 35-38).

With respect to claim 31, Gerrish discloses said calculating comprises calculating said value of said unknown impedance from said first frequency said second frequency, and said known impedance (column 3 lines 35-50).

With respect to claim 32, Gerrish discloses:

- 1) Driving said calibration signal onto said proximal end of said transmission line while said transmission line is terminated in said known impedance (column 3 lines 35-40).
- 2) Varying a frequency of said calibration signal (column 3 lines 43-45).
- 3) Determining a frequency of said calibration signal at which said particular condition in said standing wave on said transmission line occurs, wherein said determined frequency is said first frequency (column 3 lines 35-50).

With respect to claim 32, Gerrish discloses:

- 1) Driving said calibration signal onto said proximal end of said transmission line while said transmission line is terminated in said unknown impedance (column 2 lines 58-63 and column 3 lines 10-19).
- 2) Varying a frequency of said calibration signal (column 3 lines 43-45).
- 3) Determining a frequency of said calibration signal at which said particular condition in said standing wave on said transmission line occurs, wherein said determined frequency is said second frequency (column 3 lines 45-49).

With respect to claim 36, Gerrish discloses making said calculated value of said unknown impedance available to a human user (column 5 line 50-column 6 line 16).

Allowable Subject Matter

Claims 1, 3-13, 18-21 are allowed. The applicant's claims are distinguished from the prior art of record for the reasons stated in the previous office action and as presented in applicant's response filed, 10/10/2006.

Response to Arguments

On pages 11-12 of the response filed 10/10/2006, the applicant argued against the current rejection of claims under 35 USC 101. The examiner maintains that these rejections are valid in that a step of determining or calculating is not a tangible step nor is it a real-world application of a method. In this situation, a computer program or processor adapted to the claimed method could determine the delay of a calibration channel. However, according to the above method, the program or processor would not act on this determination. The delay would not be calibrated, no user would be informed, and no information pertaining to the determination would be stored for record or made available for use. Thusly, it could be said that the program or processor has accomplished nothing in the real world. However, applicant's new claims 36-42 all present viable and tangible embodiments. Incorporation of any of these new limitations into claims 14, 22, and 26 would result in a withdrawal of all current 101 rejections.

Applicant argues against the combination of references with respect to claim 18. The examiner respectfully agrees with the presented arguments and withdraws the rejection.

Applicant then argues, on page 15 of the response, against the rejection of claim 26 as being anticipated by Gerrish. Primarily, the applicant seems concerned that Gerrish does not disclose "determining" frequencies as claimed. The examiner maintains that the broadest reasonable interpretation of the term "determine" includes any such means as to make it

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available. If, as previously argued in examiner's last office action, the frequency value were to be input into the system by the user, the value was still "determined" at some point in order for it to exist to be input. However, applicants new claims 34-35, further limit the scope of the claim such that this interpretation is impossible and Gerrish no longer applies to these embodiments.

The examiner suggests that the applicant incorporate the limitations of one or more of claims 40-42 into independent claim 14; incorporate the limitations of one or more of claims 37-39 into independent claim 22; and incorporate the limitations of one or more of claim 34-35 in addition to the limitations of claim 36 into independent claim 26. This would overcome all of the present rejections of the claims.

Conclusion

Claims 34-35 and 37-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Further, claims 14-17, and 22-25 contain allowable subject matter if rewritten to overcome the above rejection under 35 USC 101.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Moffat whose telephone number is (571) 272-2255.


The examiner can normally be reached on Mon-Fri, from 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10/24/06

JM


John Barlow
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